WHAT IS CLAIMED IS:

1. A method of treating a CCR4-mediated condition or disease in a subject, said method comprising administering to a subject in need of such treatment an effective amount of a compound having the formula:

$$Ar^1\text{-}X\text{-}Ar^2 \qquad (I)$$

wherein

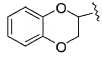
Ar^1 and Ar^2 are each members independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted fused aryl-heterocyclic ring systems and substituted or unsubstituted heteroaryl; and

X is a linking group selected from the group consisting of –N(R)-, -C(O)S-, -CH=CHSO$_2$- and –SO$_2$N(R)- wherein R is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_8)alkyl.

2. A method in accordance with claim **1**, wherein X is –NH-.

3. A method in accordance with claim **1**, wherein X is –SO$_2$NH-.

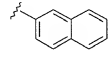
4. A method in accordance with claim **1**, wherein Ar^1 and Ar^2 are each substituted or unsubstituted members independently selected from the group consisting of:


,

,

,

,

,

and

.

5. A method in accordance with claim **2**, wherein Ar^1 is substituted heteroaryl and Ar^2 is substituted or unsubstituted aryl.

6. A method in accordance with claim **5**, wherein said Ar^1 is a substituted heteroaryl selected from the group consisting of substituted thiazolyl, substituted thienyl, and substituted furanyl.

7. A method in accordance with claim **5**, wherein said Ar^2 is a substituted or unsubstituted phenyl or a substituted or unsubstituted naphthyl.

8. A method in accordance with claim **3**, wherein Ar^2 is a phenyl group having from 1 to 4 substituents independently selected from the group consisting of halogen, hydroxy, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino.

9. A method in accordance with claim **8**, wherein said phenyl group has from 1 to 3 substituents independently selected from the group consisting of halogen, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, and (C_1-C_4)acyl.

10. A method in accordance with claim **3**, wherein Ar^1 is a substituted or unsubstituted monocyclic or bicyclic heterocycle.

11. A method in accordance with claim **10**, wherein said heterocycle is selected from the group consisting of pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl, isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl, purinyl, benzimidazolyl, indolyl, isoquinolyl, quinoxalinyl and quinolyl.

12. A method in accordance with claim **11**, wherein said heterocycle is selected from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.

13. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is selected from the group consisting of contact hypersensitivity, atopic dermatitis, allergic airway hypersensitivity, allergic rhinitis, atherosclerosis, septic shock, angina, myocardial infarction, restenosis, ischemia/reperfusion injury, multiple sclerosis, rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection.

14. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is psoriasis, contact hypersensitivity or atopic dermatitis.

15. A method in accordance with claim **14**, wherein said CCR4-mediated condition or disease is psoriasis.

16. A method in accordance with claim **14**, wherein said CCR4-mediated condition or disease is contact hypersensitivity.

17. A method in accordance with claim **14**, wherein said CCR4-mediated condition or disease is atopic dermatitis.

18. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is a disease of the airway.

19. A method in accordance with claim **18**, wherein said disease of the airway is selected from the group consisting of allergic asthma and allergic rhinitis.

20. A method in accordance with claim **18**, wherein said disease of the airway is allergic asthma.

21. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is a disease of innate immunity.

22. A method in accordance with claim **21**, wherein said disease of innate immunity is septic shock.

23. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is atherosclerosis.

24. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is a disease or condition characterized by platelet aggregation or thrombosis.

25. A method in accordance with claim **24**, wherein said CCR4-mediated disease or condition is selected from the group consisting of angina, myocardial infarction, restenosis, stroke and ischemia/reperfusion injury.

26. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is an allergic condition and said compound is used alone or in combination with at least one therapeutic agent wherein said therapeutic agent is an antihistamine.

27. A method in accordance with claim **1**, wherein said CCR4-mediated disease or condition is psoriasis and said compound is used alone or in combination with at least one therapeutic agent selected from a corticosteroid, a lubricant, a keratolytic agent, a vitamin D_3 derivative, PUVA, or anthralin.

28. A method in accordance with claim **1**, wherein said CCR4-mediated disease or condition is atopic dermatitis and said compound is used alone or in combination with at least one therapeutic agent selected from a lubricant and corticosteroid.

29. A method in accordance with claim **1**, wherein said CCR4-mediated condition or disease is asthma and said compound is used alone or in combination with at least one therapeutic agent selected from a ß2-agonist and a corticosteroid.

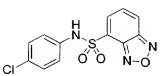
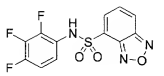
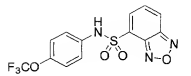
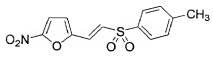
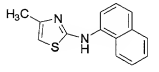
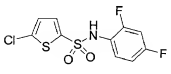
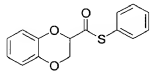
30. A method in accordance with claim **1**, wherein said compound interferes with the interaction between CCR4 and a ligand.

31. A method in accordance with claim **1**, wherein said administration is oral or intravenous.

32. A method in accordance with claim **1**, wherein said subject is selected from the group consisting of human, rat, dog, cow, horse, and mouse.

33. A method in accordance with claim **1**, wherein said subject is human.

34. A method in accordance with claim **1**, wherein said compound is selected from the group consisting of


,

,

,

,

,

and

.

35. A method in accordance with claim **1**, wherein said CCR4-mediated disease or condition is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar^1 is a substituted heterocycle; X is $-SO_2NH-$; and Ar^2 is a substituted phenyl.

36. A method in accordance with claim **1**, wherein said CCR4-mediated disease or condition is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar^1 is a substituted heterocycle; X is –NH-; and Ar^2 is naphthyl.

37. A pharmaceutical composition for the treatment of a CCR4-mediated disease or condition, said composition comprising a pharmaceutically acceptable carrier and an effective amount of a compound which inhibits the binding of MDC or TARC to CCR4, said compound having the formula:

$$Ar^1\text{-}X\text{-}Ar^2 \qquad (I)$$

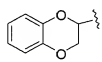
Ar^1 and Ar^2 are each members independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted fused aryl-heterocyclic ring systems and substituted or unsubstituted heteroaryl; and

X is a linking group selected from the group consisting of –N(R)-, -C(O)S-, $-CH{=}CHSO_2-$ and $-SO_2N(R)-$ wherein R is a member selected from the group consisting of H and substituted or unsubstituted $(C_1\text{-}C_8)$alkyl.

38. A composition of claim **37**, wherein X is –NH-.

39. A composition of claim **37**, wherein X is $-SO_2NH-$.

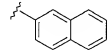
40. A composition of claim **37**, wherein Ar^1 and Ar^2 are each substituted or unsubstituted members independently selected from the group consisting of:


,

,

,

,

,

and

.

41. A composition of claim **37**, wherein Ar^1 is substituted heteroaryl and Ar^2 is substituted or unsubstituted aryl.

42. A composition of claim **41**, wherein said Ar^1 is a substituted heteroaryl selected from the group consisting of substituted thiazolyl, substituted thienyl, and substituted furanyl.

43. A composition of claim **41**, wherein said Ar^2 is a substituted or unsubstituted phenyl or a substituted or unsubstituted naphthyl.

44. A composition of claim **41**, wherein Ar^2 is a phenyl group having from 1 to 4 substituents independently selected from the group consisting of halogen, hydroxy, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino.

45. A composition of claim **44**, wherein said phenyl group has from 1 to 3 substituents independently selected from the group consisting of halogen, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, and (C_1-C_4)acyl.

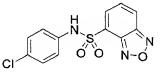
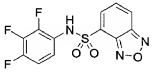
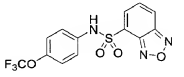
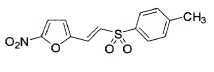
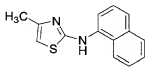
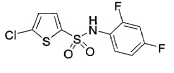
46. A composition of claim **37**, wherein Ar^1 is a substituted or unsubstituted monocyclic or bicyclic heterocycle.

47. A composition of claim **46**, wherein said heterocycle is selected from the group consisting of pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl,

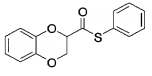
isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl, purinyl, benzimidazolyl, indolyl, isoquinolyl, quinoxalinyl and quinolyl.

48. A composition of claim **47**, wherein said heterocycle is selected from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.

49. A composition of claim **37**, wherein said compound is selected from the group consisting of


,

,

,

,

,


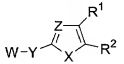
and


.

50. A method for modulating CCR4 function in a cell, comprising contacting said cell with a CCR4-modulating amount of a composition of claim **37**.

51. A method for modulating CCR4 function, in which said cell is contacted with a CCR4 protein with a therapeutically effective amount of the composition of claim **37**.

52. A compound of formula (**I**):



I

or a pharmaceutically acceptable salt thereof, wherein

W is selected from aryl, heteroaryl, (C_1-C_8)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is N, X can be $C(R^6)(R^7)$;

Y is selected from a bond, $N(R^5)$, $N(R^5)$-$(C_1$-$C_8)$alkylene, O, S and $S(O)_n$, wherein the integer n is 1 or 2;

Z is selected from N and $C(R^8)$;

R^1 and R^2 are independently selected from H, halogen, CN, CO_2R', CONR'R", $(C_1$-$C_8)$alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, R^1 and R^2 combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R" are independently selected from H, $(C_1$-$C_8)$alkyl and aryl, and when R' and R" are attached to nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

R^3, R^4 and $R^8$are independently selected from H, halogen, CN, OH, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl, heteroaryl, $O(C_1$-$C_8)$alkyl, $N(R^6)(R^7)$ and OR^9;

R^5 is selected from H, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl and heteroaryl;

R^6 and R^7 are independently selected from H, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl and heteroaryl; and

R^9 is selected from $(C_1$-$C_8)$alkyl, heteroalkyl and haloalkyl;

with the provisos that R^2 is other than H when W is unsubstituted phenyl, X is S, Y is NH, Z is N and R^1 is $(C_1$-$C_8)$alkyl; and R^1 is other than phenyl, when W is phenyl or unsubstituted naphthyl, X is S, Y is NH, and Z is N.

53. A compound of claim **52**, wherein Z is N.

54. A compound of claim **52**, wherein X is S.

55. A compound of claim **52**, wherein Y is $N(R^5)$.

56. A compound of claim **52**, wherein Z is N, X is S and Y is $N(R^5)$.

57. A compound of claim **52**, wherein W is aryl or heteroaryl.

58. A compound of claim **57**, wherein W is substituted or unsubstituted phenyl or naphthyl.

59. A compound of claim **57**, wherein W is substituted or unsubstituted pyridyl or quinolyl.

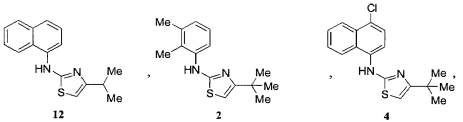
60. A compound of claim **52**, wherein R^1 and R^2 are each independently selected from H and (C_1-C_8)alkyl.

61. A compound of claim **52**, wherein R^1 and R^2 are combined to form a fused 6-membered aryl or heteroaryl ring.

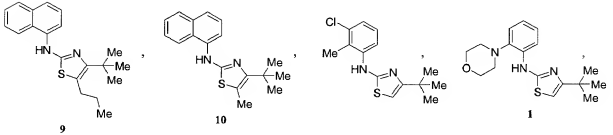
62. A compound of claim **52**, wherein Z is N, X is S, Y is $N(R^5)$ and R^1 and R^2 are each independently selected from H and (C_1-C_8)alkyl.

63. A compound of claim **52**, wherein Z is N, X is S, Y is $N(R^5)$ and R^1 and R^2 are combined to form a fused 6-membered aryl or heteroaryl ring.

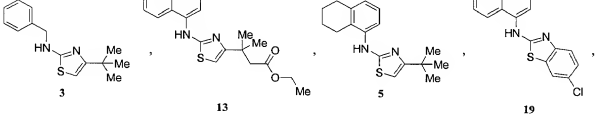
64. A compound of claim **52**, said compound being selected from the group consisting of:



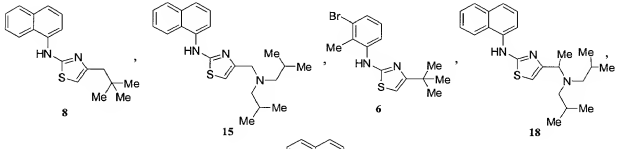
12 , 2 , 4 ,



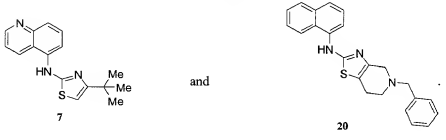
9 , 10 , , 1 ,



3 , 13 , 5 , 19 ,

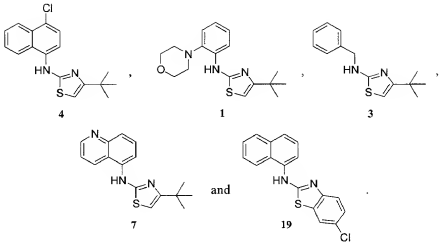


8 , 15 , , 6 , 18 ,



7 and 20 .

65. A compound of claim **52**, said compound being selected from the group consisting of:



4 1 3 and 7 19

66. A compound of claim **52**, wherein

W is selected from substituted phenyl, substituted or unsubstituted naphthyl, pyridyl, quinolyl, (C_1-C_8)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is N, X can be $C(R^6)(R^7)$;

Y is selected from a bond, $N(R^5)$, $N(R^5)$-(C_1-C_8)alkylene, O, S and $S(O)_n$, wherein the integer n is 1 or 2;

Z is selected from N and $C(R^8)$;

R^1 and R^2 are independently selected from H, halogen, CN, CO_2R', CONR'R", (C_1-C_8)alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, R^1 and R^2 combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R" are independently selected from H, (C_1-C_8)alkyl and aryl, and when R' and R" are attached to a nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

R^3, R^4 and $R^8$are independently selected from H, halogen, CN, OH, (C_1-C_8)alkyl, heteroalkyl, aryl, heteroaryl, O(C_1-C_8)alkyl, $N(R^6)(R^7)$ and OR^9;

R^5 is selected from H, (C_1-C_8)alkyl, heteroalkyl, aryl and heteroaryl;

R^6 and R^7 are independently selected from H, (C_1-C_8)alkyl, heteroalkyl, aryl and heteroaryl; and

R^9 is selected from (C_1-C_8)alkyl, heteroalkyl and haloalkyl.

67. A compound of claim **66**, wherein Z is N.

68. A compound of claim **66**, wherein X is S.

69. A compound of claim **66**, wherein Y is $N(R^5)$.

70. A compound of claim **66**, wherein Z is N, X is S and Y is $N(R^5)$.

71. A compound of claim **66**, wherein W is substituted phenyl or substituted or unsubstituted naphthyl.

72. A compound of claim **66**, wherein W is substituted or unsubstituted pyridyl or substituted or unsubstituted quinolyl.

73. A compound of claim **66**, wherein R^1 and R^2 are independently selected from the group consisting of H and $(C_1\text{-}C_8)$alkyl.

74. A compound of claim **66**, wherein R^1 and R^2 are combined to form a fused 6-membered aryl or heteroaryl ring.

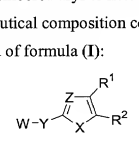
75. A compound of claim **66**, wherein W is substituted phenyl or substituted or unsubstituted naphthyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2 are independently selected from the group consisting of H and $(C_1\text{-}C_8)$alkyl.

76. A compound of claim **66**, wherein W is substituted phenyl or substituted or unsubstituted naphthyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2 are combined to form a fused 6-membered aryl or heteroaryl ring.

77. A compound of claim **66**, wherein W is substituted or unsubstituted pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2 are independently selected from the group consisting of H and $(C_1\text{-}C_8)$alkyl.

78. A compound of claim **66**, wherein W is substituted or unsubstituted pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2 are combined to form a fused 6-membered aryl or heteroaryl ring.

79. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound of formula (**I**):



I

or a pharmaceutically acceptable salt thereof, wherein

W is selected from aryl, heteroaryl, (C_1-C_8)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is N, X can be $C(R^6)(R^7)$;

Y is selected from a bond, $N(R^5)$, $N(R^5)$-(C_1-C_8)alkylene, O, S and $S(O)_n$, wherein the integer n is 1 or 2;

Z is selected from N and $C(R^8)$;

R^1 and R^2 are independently selected from H, halogen, CN, CO_2R', CONR'R", (C_1-C_8)alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, R^1 and R^2 combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R" are independently selected from H, (C_1-C_8)alkyl and aryl, and when R' and R" are attached to nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

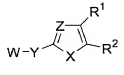
R^3, R^4 and $R^8$are independently selected from H, halogen, CN, OH, (C_1-C_8)alkyl, heteroalkyl, aryl, heteroaryl, $O(C_1$-$C_8)$alkyl, $N(R^6)(R^7)$ and OR^9;

R^5 is selected from H, (C_1-C_8)alkyl, heteroalkyl, aryl and heteroaryl;

R^6 and R^7 are independently selected from H, (C_1-C_8)alkyl, heteroalkyl, aryl and heteroaryl; and

R^9 is selected from (C_1-C_8)alkyl, heteroalkyl and haloalkyl.

80. A method for treating a CCR4-mediated condition in a subject, said method comprising administering to a subject in need of such treatment an effective amount of a compound of of formula (**I**):



I

or a pharmaceutically acceptable salt thereof, wherein

W is selected from aryl, heteroaryl, (C_1-C_8)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is N, X can be $C(R^6)(R^7)$;

Y is selected from a bond, $N(R^5)$, $N(R^5)$-$(C_1$-$C_8)$alkylene, O, S and $S(O)_n$, wherein the integer n is 1 or 2;

Z is selected from N and $C(R^8)$;

R^1 and R^2 are independently selected from H, halogen, CN, CO_2R', CONR'R", $(C_1$-$C_8)$alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, R^1 and R^2 combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R" are independently selected from H, $(C_1$-$C_8)$alkyl and aryl, and when R' and R" are attached to nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

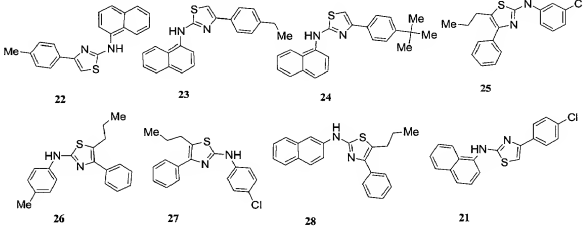
R^3, R^4 and $R^8$are independently selected from H, halogen, CN, OH, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl, heteroaryl, $O(C_1$-$C_8)$alkyl, $N(R^6)(R^7)$ and OR^9;

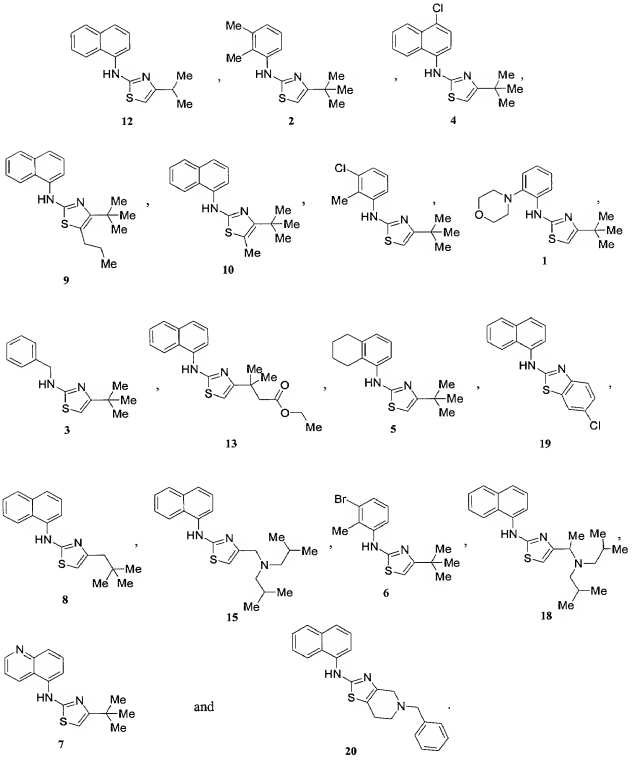
R^5 is selected from H, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl and heteroaryl;

R^6 and R^7 are independently selected from H, $(C_1$-$C_8)$alkyl, heteroalkyl, aryl and heteroaryl; and

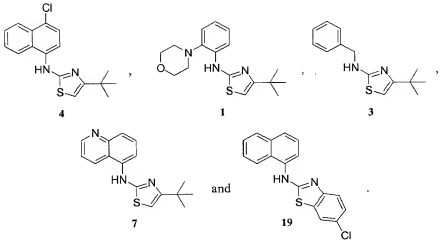
R^9 is selected from $(C_1$-$C_8)$alkyl, heteroalkyl and haloalkyl.

81. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound selected from the group consisting of:

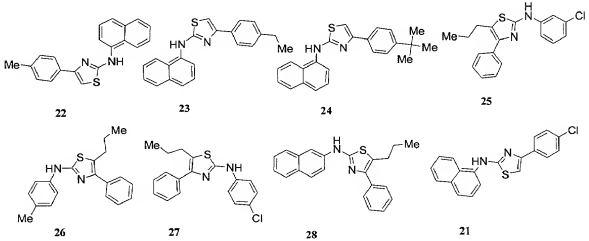


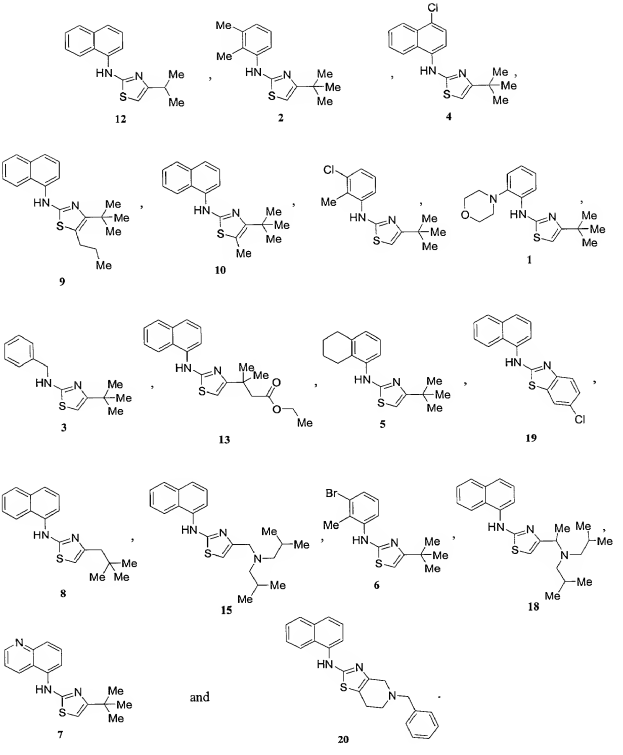


82. A pharmaceutical composition of claim **81**, wherein said compound is selected from the group consisting of:



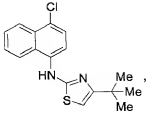
83. A method for treating a CCR4-mediated condition in a subject, said method comprising administering to a subject in need of such treatment an effective amount of a compound selected from the group consisting of:



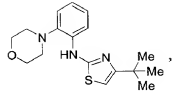


12 , 2 , 4 ,
9 , 10 , 1 ,
3 , 13 , 5 , 19 ,
8 , 15 , 6 , 18 ,
7 and 20 .

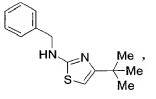
84. A method in accordance with claim **83**, wherein said compound is selected from the group consisting of:



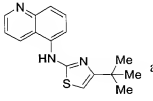
4 ,



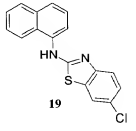
1 ,



3 ,



7 and



19 .

3